

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-13 (cancelled)

Claim 14 (original): A computer implemented method for preparing a binding-ready biological sample for a binding assay, comprising:

- receiving a binding assay design for a binding assay;
- preparing an experiment design for generating a binding-ready biological sample to be used in said binding assay;
- choosing a robot method for generating said binding-ready biological sample;
- generating work instructions for generating said binding-ready biological sample based on said experiment design and said robot method; and
- executing said work instructions on robot stations to generate the binding-ready biological sample.

Claim 15 (original): The method of claim 14, further comprising, before said generating, optimizing materials usage and plate layout for generating said binding-ready biological sample.

Claim 16 (original): The method of claim 14, further comprising, before said generating, checking inventory for materials required for said experiment design.

Claim 17 (original): The method of claim 16, wherein said checking comprises:

- sending a inventory request to an inventory system;
- receiving a list of all materials available in inventory;
- ascertaining whether there are enough materials in inventory for said preparation.

Claim 18 (original): The method of claim 16, wherein said checking comprises:

sending a inventory request to an inventory system, where said inventory request contains a list of materials required for said preparation;

receiving inventory data indicating whether said materials are available in inventory; and
ascertaining from said inventory data whether said materials are available in inventory.

Claim 19 (original): The method of claim 18, wherein said ascertaining comprises:

concluding that there are not enough materials in inventory for said preparation;
notifying an operator that there are insufficient materials in inventory; and
repeating said ascertaining until there are enough materials in inventory for said preparation.

Claim 20 (original): The method of claim 14, wherein said receiving further comprises acquiring a tissue sample.

Claim 21 (original): The method of claim 20, further comprising, after said acquiring:

extracting a constituent sample from said tissue sample; and
updating inventory to include said constituent sample.

Claim 22 (original): The method of claim 14, wherein said binding-ready biological sample is a hybridization-ready biological sample, and said binding assay is a hybridization assay.

Claim 23-25 (cancelled)